

# Current Water Conditions in Massachusetts

## May 7, 2015



- April precipitation was below normal
- April streamflows were normal
- April groundwater levels were normal
- April reservoir levels were normal

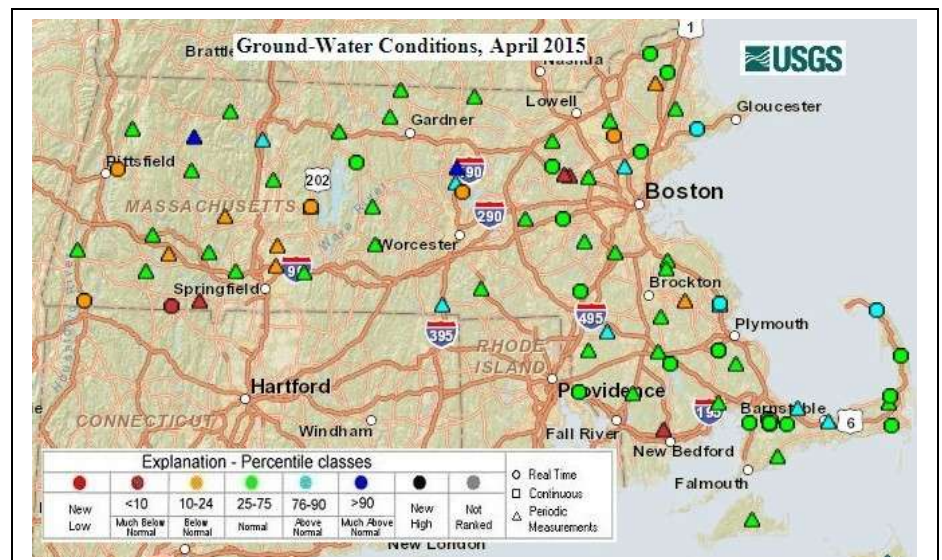
### Precipitation Conditions

Estimated April state-wide average precipitation is 2.58 inches, which is 68 percent of the long-term average (3.81 inches) for the month. Precipitation in the regions of Massachusetts ranged from 36 percent (Cape Cod and Islands) to 85 percent (Western) of the long term average. A table of April 2015 estimated precipitation statistics, based on preliminary precipitation data from the Department of Conservation and Recreation and National Weather Service precipitation monitoring networks, is attached. A map at the back of this report shows the areal distribution of April rainfall.

An extended period of low precipitation has resulted in state-wide dry conditions that are favorable for brush and forest fires, especially on warm dry days with a southwest wind direction.

### Ground-Water Levels

Ground-water levels reported by the U.S. Geological Survey at the end of April or beginning of May were generally in the normal range state-wide. A few below normal levels were measured, especially in the lower Connecticut Valley and far western areas of the state. An assessment of ground-water conditions in the Massachusetts drought regions is shown as being normal in the table at the end of this report. The USGS Groundwater Conditions for the end of April 2015 can be viewed at the web site: <http://groundwaterwatch.usgs.gov/State/MapsNet.asp?ncd=crn&sc=25>

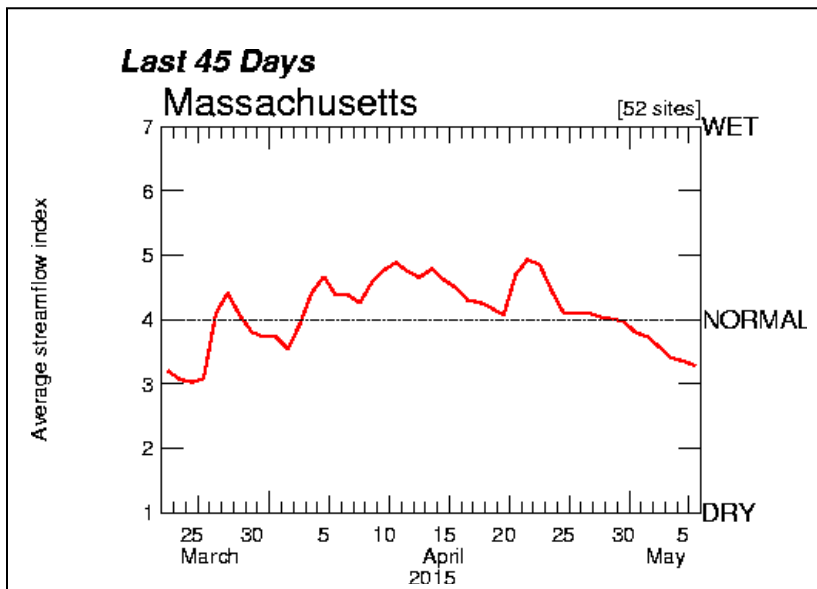
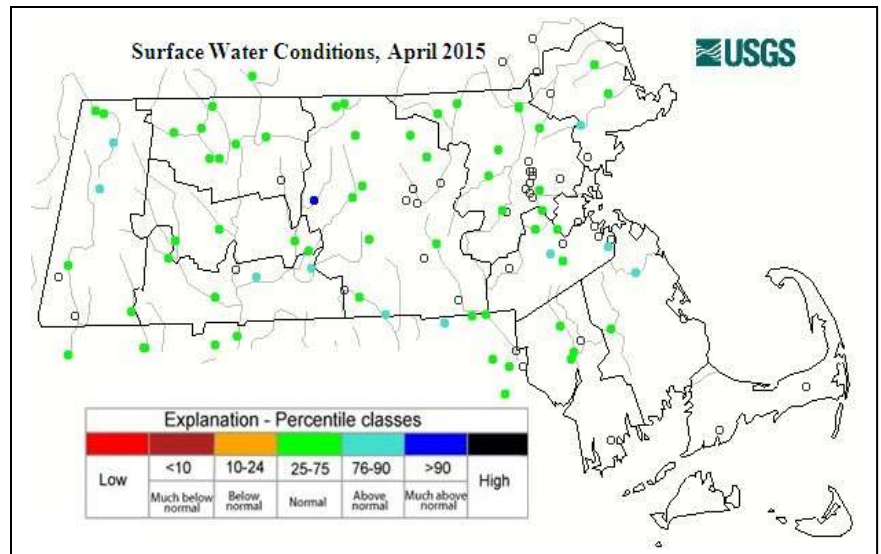


## Streamflow

Average April 2015 streamflows that are monitored by the Commonwealth of Massachusetts and United States Geological Survey (USGS) cooperative stream gaging program were generally normal in all areas of the state.

The graph below depicts a composite daily streamflow relative to normal streamflow for Massachusetts for the period of March 23, to May 6, 2015. Stream flows were in the high normal range during most of April but have fallen into the low normal range during early May as a result of low precipitation during most of May. The graph is a composite of 52 real-time gages across the state with a long period of record. This streamflow plot can be found at:

[http://waterwatch.usgs.gov/index.php?map\\_type1=pa07d&map\\_type2=&map\\_type3=&map\\_type4=&web\\_type=pa07d%2Cplot&state=ma&huc=us&xinfo=&map\\_type=real&group\\_idx=1&region\\_cd=ma&group\\_idx\\_changed=1&sel\\_n=map\\_type1&sel\\_va=real](http://waterwatch.usgs.gov/index.php?map_type1=pa07d&map_type2=&map_type3=&map_type4=&web_type=pa07d%2Cplot&state=ma&huc=us&xinfo=&map_type=real&group_idx=1&region_cd=ma&group_idx_changed=1&sel_n=map_type1&sel_va=real)



### KEY:

- 1 = New record low for day
- 2 = < 10<sup>th</sup> percentile
- 3 = 10<sup>th</sup> – 24<sup>th</sup> percentile
- 4 = 25<sup>th</sup> – 74<sup>th</sup> percentile
- 5 = 75<sup>th</sup> – 89<sup>th</sup> percentile
- 6 = ≥ 90<sup>th</sup> percentile
- 7 = New record high for day

## Water Supply Reservoir Levels

Selected surface water reservoir percent-full values for water supply sources provided by water suppliers are listed below. These levels are generally normal for this time of year. The reservoir percent-full values listed are for the end of April or the beginning of May 2015.

*April/May 2015 Massachusetts Reservoir Status*

Reservoir/City or Town	Percent Full	Reservoir/City or Town	Percent Full
Quabbin	96.8	Beverly/Salem	100
Worcester	102.9	Lynn	83.3
Cobble Mt./ Springfield	92.6	Taunton/New Bedford/Assawompsett	97.6

Note: NA Indicates data not available for this report

## Drought Indices/Forecasts

### US Drought Monitor

The National Drought Mitigation Center's (NDMC's) May 6, 2015 Drought Monitor Map shown at right indicates that most of the state has abnormally dry conditions. Cape Cod and Islands, the southeast, and a small coastal area in the northeast have normal conditions. The abnormally dry designation is the result of several months of low precipitation in that area.

### Standardized Precipitation Index (SPI)

All the Standardized Precipitation Index values for the regions used for the Massachusetts Drought Management Plan are in the normal range. The value for the western Region is close to advisory level.

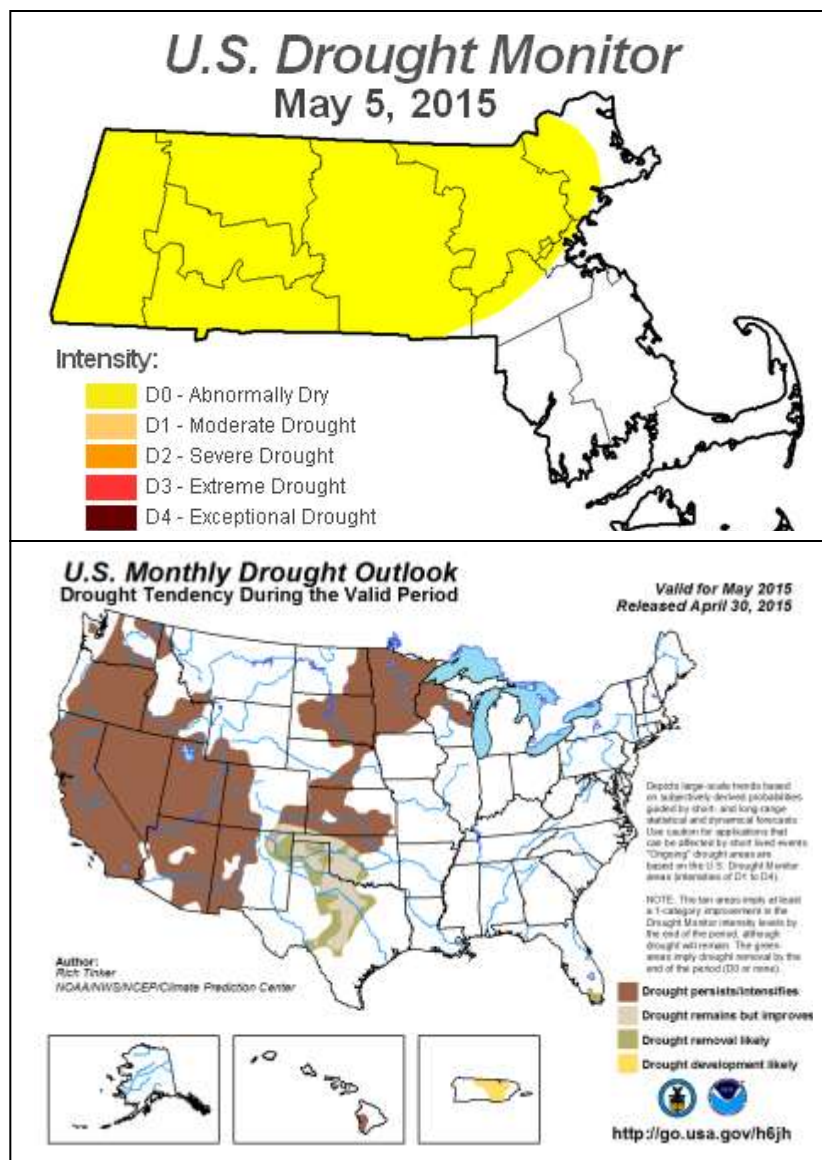
### NWS/NOAA's Climate Prediction Center

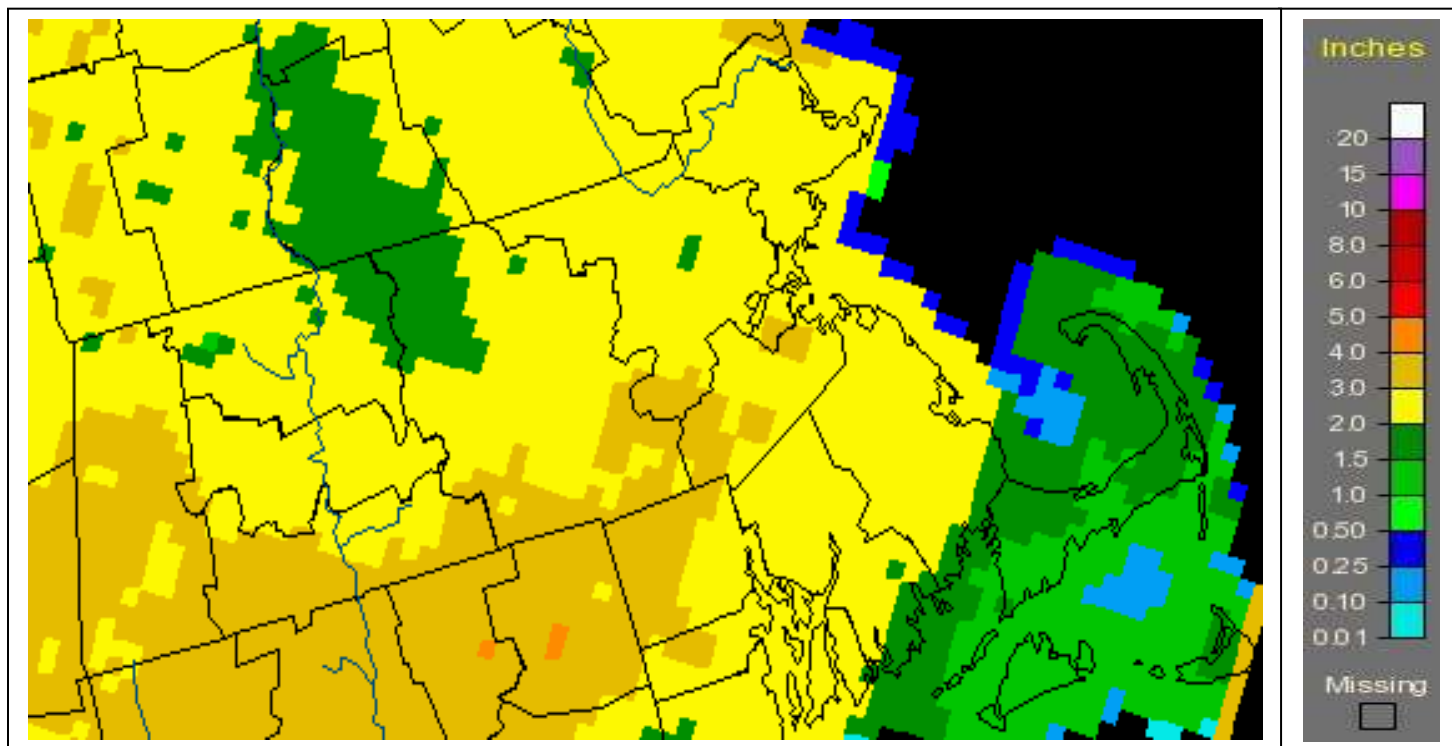
The U.S. Monthly Drought Outlook for May (shown at the right) forecasts that drought conditions will probably not develop during May 2015. The seasonal drought outlook (not shown) predicts that there will likely be no development of drought conditions through the end of July in Massachusetts.

### Extended Forecasts

Dry warm weather will continue through the weekend. There may be a brief cool period Friday from a backdoor cold front. Scattered showers are forecast for early next week and a general cooling trend later in the week. The National Weather Service Climate Prediction Center's extended 6 to 10- day forecast is for above normal precipitation and above normal temperatures. The 8 to 14-day forecast is for below normal precipitation and above normal temperatures. The 1-month forecast is for normal precipitation and above normal temperatures. The NWS Climate Prediction Center Information can be found at:

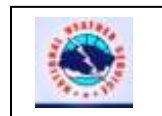
<http://www.cpc.noaa.gov/index.php>





<http://water.weather.gov/precip/>

### TOTAL RAINFALL APRIL 2015



### GENERAL WATER CONDITIONS IN MASSACHUSETTS - APRIL 2015 EOEEA and MEMA DROUGHT MANAGEMENT PLAN REGIONS

Massachusetts Regions	Surface-Water Conditions	Ground-Water Conditions
Cape and Islands	ND	Normal
Southeast	Normal	Normal
Northeast	Normal	Normal
Central	Normal	Normal
Connecticut River	Normal	Normal
Western	Normal	Normal

**Note:** Surface- and ground-water conditions for individual streamflow-gaging stations and wells may differ from general conditions. ND, no data

This report was prepared by the Massachusetts Department of Conservation and Recreation. Data were obtained from the sources described in the report and may be preliminary in nature. Additional information, previous and future water conditions reports can be found on our web site:

<http://www.mass.gov/eea/agencies/dcr/water-res-protection/water-data-tracking/precipitation-composite-current-conditions.html>